

ABSTRACT

In order to accurately and efficiently alloy a Mg-REM-Ni based hydrogen-absorbing alloy in accordance with a target composition, which was difficult in the industrial production by the conventional technique, a rare earth element starting material and a nickel starting material are firstly melted in a melting furnace to form a melt of REM-Ni alloy, and then a magnesium starting material is added to the alloy melt and an interior of the melting furnace is kept at a given pressure to form a melt of Mg-REM-Ni alloy, and thereafter the alloy melt is cooled and solidified at a given cooling rate to produce a Mg-REM-Ni based hydrogen-absorbing alloy.